This listing of claims will replace all prior versions, and listings, of claims in the application:

The Status of the Claims

1. (Currently Amended): An apparatus for performing reverse playback of digitally recorded coded audiovisual data, comprising:

a transport processor to receive coded audiovisual data from an input port;

a first memory operatively connected to the transport processor and to receive the coded audiovisual data from the transport processor;

a second memory operatively connected to a bus for ~~storing the~~ digitally ~~recorded~~ recording the coded audiovisual data;

a host processor operatively coupled to the first memory and the second memory, wherein the host processor is configured to transfer the coded audiovisual data from the first memory to the second memory;

a decoder coupled to the bus for receiving and decoding a portion of the digitally recorded coded audiovisual data from the second memory, the decoder including an associated decoder memory, wherein the decoder stores the decoded portion in the decoder memory and outputs the decoded portion in a non-reversed order; and

a graphics accelerator processor operatively connected to said bus and to the decoder, the graphics accelerator processor including an associated graphics accelerator memory, wherein the graphics accelerator processor receives the decoded portion in the non-reversed order and writes the decoded portion in the non-reversed order to the graphics accelerator memory, and wherein the graphics accelerator processor in response to a command reads the decoded portion from the graphics accelerator memory in a reversed order for reproduction as a displayed reverse playback of the portion of the digitally recorded coded audiovisual data.

2. (Cancelled)

3. (Currently Amended): The apparatus according to claim ~~2~~ 1, wherein the recording device includes at least one mass storage device.

4. (Currently Amended): The apparatus according to claim ~~2~~ 1, ~~further comprising:~~

~~a transport processor operatively connected to said bus and to an input port for receiving coded audiovisual data from said input port;~~

~~a~~ wherein the host processor ~~operatively connected to said bus and said memory for~~

~~performing~~ is configured to perform graphics-user interface and browser functions~~; and~~

~~an interface for receiving said coded audiovisual data from said transport processor, and for transferring said received coded audiovisual data simultaneously to said memory via said bus, and to said decoder,~~

~~said memory further including a buffer space for temporarily storing the audiovisual data received from said interface,~~

~~said host processor directing said memory to transfer said coded audiovisual data to be digitally recorded by said recording device, and~~

~~said interface adapted to receive said digitally recorded coded audiovisual data from said recording device via said memory and said bus~~.

5. (Cancelled)

6. (Previously Presented): The apparatus according to claim 1, wherein said digitally recorded coded audiovisual data transferred to said decoder is further embodied as a plurality of frames composing a group of pictures, GOP, such that said decoder receives successive GOPs to be played back, and wherein said graphics accelerator processor plays back a first GOP of said successive GOPs to be played back while said decoder decodes a second GOP of said successive GOPs to be played back.

7. (Original): The apparatus according to claim 6, wherein the frames within said successive GOPs that are played back in reverse are at least I-frames and P-frames.

8. (Original): The apparatus according to claim 6, wherein the frames within said successive GOPs that are played back in reverse are I-frames, P-frames and B-frames.

9. (Currently Amended): The apparatus according to claim ~~5~~ 1, wherein said digitally recorded coded audiovisual data transferred from said interface to said decoder is further embodied as a plurality of frames composing a group of pictures, GOP, so that said decoder receives successive GOPs to be played back, and said graphics accelerator processor plays back a first GOP of said successive GOPs to be played back while said decoder decodes a second GOP of said successive GOPs to be played back.

10. (Original): The apparatus according to claim 9, wherein the frames within said successive GOPs that are played back in reverse are at least I-frames and P-frames.

11. (Original): The apparatus according to claim 9, wherein the frames within said successive GOPs that are played back in reverse are I-frames, P-frames and B-frames.

12. (Original): The apparatus according to claim 1, wherein a preset delay is inserted at the beginning of the displayed reverse playback.

13. (Original): The apparatus according to claim 10, wherein a delay of about t seconds is inserted at the beginning of the displayed reverse playback, and

wherein t=(nI + mP)*FT (sec), (nI + mP) being equal to the number of I and P-frames in a GOP, and FT being the frame time.

14. (Original): The apparatus according to claim 11, wherein a delay of about t seconds is inserted at the beginning of the displayed reverse playback, and

wherein t=(nI + mP + lB)*FT (sec), (nI + mP+ lB) being equal to the number of I, P and B-frames in a GOP, and FT being the frame time.

15. (Previously Presented): The apparatus according to claim 1, wherein the graphics accelerator processor further includes:

a graphics engine for performing graphics processing on decoded audiovisual data input from said decoder to prepare the data for display;

a buffer memory for temporarily storing the decoded audiovisual data;

a memory interface for communicating with said graphics engine and said buffer for directing the decoded audiovisual data to a storage location in said buffer, and for instructing said buffer to output selected audiovisual data to said graphics engine in said temporally reversed decoded order for graphics processing; and

an encoder for encoding the processed and temporally-reversed audiovisual data for reverse playback display.

16. (Original): The apparatus of claim 1, wherein said digitally recorded coded audiovisual data to be played back in reverse is embodied as a plurality of group of pictures, GOP, the GOP consisting of I-frames, P-frames and B-frames, and

wherein reverse playback being achievable up to N times, where N equals the number of B-frames intervening between I and P and/or successive P frames in the GOP plus 1.

17. (Original): The apparatus of claim 16, wherein playback up to N times is achievable by forwarding only data of the I and P frames to the decoder, data of the B-frames being dropped prior to decoding.

18. (Currently Amended): A method of reverse playback for digitally recorded coded audiovisual data, comprising:

receiving at a transport processor coded audiovisual data from an input port;

receiving at a first memory the coded audiovisual data from the transport processor;

transferring the ~~digitally recorded~~ coded audiovisual data from the first memory to a second memory that digitally records the coded audiovisual data;

transferring the digitally recorded audiovisual data from the second memory to a decoder;

receiving and decoding a portion of the digitally recorded coded audiovisual data;

storing the decoded portion in a decoder memory;

outputting the decoded portion in a non-reversed order to a graphics accelerator processor ;

receiving at the graphics accelerator processor the decoded portion in the non-reversed order;

writing the decoded portion in the non-reversed order to a graphics accelerator memory;

receiving a command;

in response to the command the graphics accelerator processor reading the decoded portion from the graphics accelerator memory in a reversed order for reproduction as a displayed reverse playback of the portion of the digitally recorded coded audiovisual data, and

outputting said reversed order decoded audiovisual data for a displayed playback.

19. (Cancelled)

20. (Original): The method according to claim 18, wherein said step of transferring further includes transferring said digitally recorded coded audiovisual data from said memory to said decoder via a bus and an interface.

21. (Original): The method according to claim 18, wherein said digitally recorded coded audiovisual data transferred to said decoder is further embodied as a plurality of frames composing a group of pictures, GOP, such that said decoder receives successive GOPs to be played back, and wherein said step of temporally reversing includes reversing the decoded order of and playing back a first GOP of said successive GOPs simultaneous with decoding a second GOP of said successive GOPs.

22. (Original): The method according to claim 21, wherein the frames within said successive GOPs that are played back in reverse are at least I-frames and P-frames.

23. (Original): The method according to claim 21, wherein the frames within said successive GOPs that are played back in reverse are I-frames, P-frames and B-frames.

24. (Original): The method according to claim 22, further comprising inserting a delay of about t seconds prior to said step of outputting the displayed reverse playback, wherein t=(nI + mP)*FT (sec), (nI + mP) being equal to the number of I and P-frames in a GOP, and FT being the frame time.

25. (Original): The method according to claim 23, further comprising inserting a delay of about t seconds prior to said step of outputting the displayed reverse playback, wherein t=(nI + mP + lB)*FT (sec), (nI + mP+ lB) being equal to the number of I, P and B-frames in a GOP, and FT being the frame time.

26. (Original): The method according to claim 18, wherein said digitally recorded coded audiovisual data to be played back in reverse is embodied as a plurality of group of pictures, GOP, the GOP consisting of I-frames, P-frames and B-frames, and

wherein reverse playback is achievable up to N times, where N equals the number of intervening B-frames between I and P and/or successive P frames in the GOP plus 1.

27. (Original): The method of claim 26, wherein playback up to N times is achievable by forwarding only data of the I and P frames for decoding, data of the B-frames being dropped prior to decoding.

28-39. (Cancelled)